

Application No.: 09/503,524
Amdt. dated: 12/19/2005
Response to Office Action of 11/29/2005

Remarks/Arguments

Claims 23-26 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Burns (US Patent #4,949,639). Applicant respectfully submits that the claims are patentable over the references whether taken singly or in any combination.

Claim Rejections - 35 USC § 102

Under § 102 every aspect of the rejected claims must be found in a single reference. Applicant respectfully submits that Burns fails to anticipate the invention because Burns does not teach all limitations of Applicant's invention even if the Examiner's interpretation of the reference is given full weight.

One of the aspects of claim 23 not found in the prior art is the limitation of:

"determining a delay by comparing the current temperature data with the temperature performance profile." (Claim 23, lines 6-7, emphasis added).

It has argued in the final office action that Burns includes this limitation because Burns "discloses a temperature-compensated, acceleration-activated igniter ...determining an ignition delay based on temperature data ..." However, this argument misses the point of the invention. While Burns does include a spring mechanism 72 that varies with temperature, Burns provides no claim limitation, means, mechanism, process or teaching for determining an ignition delay for "comparing current temperature with the temperature performance profile" of a cartridge. The spring mechanism 72 does not and cannot perform a comparison but merely reacts to ambient temperature conditions in accordance with the spring constant equation. (Burns Col. 6, lines 1-5). Burns does not employ the temperature performance profile of the cartridge as required by the instant invention. In fact, given that Burns' mechanism uses only temperatures actuating spring mechanism 72, considering the temperature profile would have no impact on the operation of the Burns ignitor once a spring constant has been selected.

In furtherance of the differences between Burns and the present invention, note that the pressure curves shown in Figs. 5A and 5B of Burns are not employed to determine a delay, but rather are merely plotted results of occurrences after the ignitions have occurred. In contrast, the

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present invention uses temperature data as part of the delay determination by comparing current temperatures to the temperature performance profile to make the determination. Thus, claim 23 is allowable over Burns and all of the cited references, whether taken singly or in any combination, because the reference does not disclose all of the claim limitations, particularly with regard to determination of a delay based on comparing current temperature with the temperature performance profile.

Claim Rejections - 35 USC § 103

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

With respect to claim 23, the same arguments apply as above with respect to anticipation under § 102. Further, no written reference has been cited that would provide the missing limitations of Burns as argued above. Further still, there is nothing inherent in the thermal spring as taught by Burns that would lead one skilled in the art to perform the step of "comparing current temperature with the temperature performance profile." Since Burns teaches use of a passive component such as the thermal spring, one skilled in the art would not be motivated to replace such a passive component with the active step of comparing temperature with a profile. Thus, claim 23 is allowable over the references, whether taken singly or in any combination, because the reference does not disclose all of the claim limitations, particularly with regard to determination of a delay based on temperature characteristics. Because claims 24-26 depend from allowable claim 23, claims 24-26 are also allowable.

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Claim 26 as amended

The Examiner has given no weight to all of the limitations of claim 26 arguing that in order to be entitled to weight in method claims, the recited structure limitations (i.e. the translation mechanism comprising two interlocking tubes) therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure. The claim has been so amended and is now in condition for allowance.

Further with respect to claim 26, as amended, none of the references show or suggest a limitation drawn to "two interlocking tubes [that] include an exterior tube and an interior tube where the exterior tube moves forward and separates from interior tube so that a safety sensor mechanically coupled to the exterior tube then operates to send a movement sensor activation signal to indicate whether it is safe to fire the second initiator." Thus, claim 26 is allowable over the references, whether taken singly or in any combination, because the reference does not disclose all of the claim limitations, particularly with regard to determination of a delay based on temperature characteristics.

Applicant requests respectfully consideration of the withdrawn claims upon allowance of a generic claim.

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Conclusions

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone George A. Leone, Applicants' Attorney at 763-767-2762 so that such issues may be resolved as expeditiously as possible. For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date



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